https://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic/George+Air+Force+Base?OpenDocument

Pacific Southwest, Region 9: Superfund

Serving Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations

George Air Force Base

On this page

Description and History

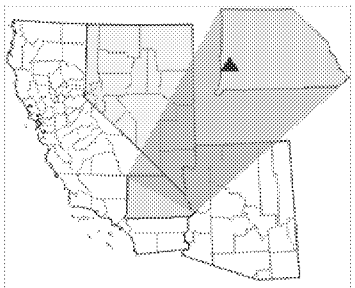
NPL Listing History

NPL Status: Final
Proposed Date: 07/14/89
Final Date: 02/21/90
Deleted Date:

Bulletin Board

On 10/13/17, this website will no longer be updated. Site information will be migrated to the new web page at: http://www.epa.gov/superfund/georgeafb. EPA appreciates your patience through this transition. If you have questions, please contact EPA staff listed below.

EPA #: CA2570024453
State: California(CA)
County: San Bernardino
City: Victorville
Congressional District: 25
Other Names:



Map this site in Cleanups in My Community

George Air Force Base occupies 5,347 acres and is located in San Bernardino County, California near the cities of Victorville and Adelanto. The base was established in World War II and closed in December 1992. Its mission was to support tactical fighter operations and provided training for air crews and maintenance personnel. To meet mission requirements, the base engaged in a variety of support operations such as aircraft maintenance and fire fighting training that mandated the use and disposal of hazardous and non-hazardous materials.

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Contaminants and Risks

Contaminated Media

- Groundwater
- Soil and Sludges

Groundwater is contaminated with jet fuel, trichloroethylene (TCE), pesticides, and nitrates. Soil is contaminated with total petroleum hydrocarbons, dioxins, construction debris, medical wastes, pesticides, semi volatile organic compounds, and various inorganic compounds. Accidental ingestion of, or direct contact with the contaminants may pose a health risk.

Who is Involved

The EPA, State, and AF signed a Federal Facilities Agreement (FFA) in October 1990 for cleaning up the base. GAFB was officially closed on 15 December 1992. The US Air Force is the lead agency for site cleanup, with the U. S. EPA and the State of California Lahontan Regional Water Quality Control Board (RWQCB) providing regulatory oversight through FFA Base Closure Team (BCT) procedures. The California Department of Toxic Substances Control (DTSC), formerly California Department of Health Services, was part of the BCT until 1998 when they deferred their roles and responsibilities to the RWQCB.

Investigation and Cleanup Activities

The base cleanup is addressed by three operable units (OU): OU1 is the 600-acre TCE groundwater plume in the Northeast base area and extends off base; OU3 is the landfills and/or disposal sites with other various VOC soil sites and; OU5 is a TCE soil contamination source column over the OU1 groundwater plume. Because of the petroleum exclusion policy, OU2 was pulled out of the CERCLA process in 2005 for State oversight. OU4 and OU5 were created in 2007 but because of funding constraints later, the two were combined to OU5. OU4 was to document the completed response actions for miscellaneous sites that dropped out from OU2.

Initial Actions

Initial Actions: In 1991, the Air Force (AF) began operating a pump and treat (PAT) system with air stripping for groundwater contaminated with TCE under OU1's northeast base area that migrated off base. In early 1992, the AF started removing the jet fuel (JP-4) free product at OU2 using passive skimming technology, and supplemented SVE for removing VOCs from soils several years later. Remedial actions for various OU3 sites were started in the mid 1990s to remove VOCs from soil sites. SVE was implemented as a pilot project in OU5 to address the TCE soil source column.

Cleanup Ongoing

OU1 Northeast Base Area: The OU1 ROD of March 1994 selected PAT and access controls as the remedy for the TCE groundwater plume beneath the northeast area. With a capacity pumping rate of 1100 gpm, the PAT system in conjunction with percolation ponds were designed to "flush" the TCE from the upper into the lower aquifer to promote treatment capability. Highest TCE levels before PAT started was 420 ppb in the upper aquifer, but rose to 1200 ppb from the contaminate migration due to flushing. The flushing approach pushed TCE to edge of the upper aquifer where it's "temporarily stored," and could take many decades for it to migrate or cascade into the lower aquifer. The steep terrain in this immediate area prevents efficient monitoring or remedial actions.

The PAT system was partially shutdown in June 1999 to address ROD violation concerns with TCE migration. The entire PAT system has been shutdown since 2003 as it was exacerbating the TCE migration problem. AF is revising the groundwater model to include data from the 2014 field investigations. The AF discovered that Site FT-082 was a TCE soil source column to the OU1 groundwater plume and implemented soil vapor extraction (SVE) in 2007 as a pilot project. The ROD amendment for the OU1 groundwater plume is planned for completion in 2018.

OU2 Jet Fuel Plume: OU2 has over two million gallons of free product in groundwater. Passive skimming to remove the jet fuel from groundwater started in 1992 and monitored natural attenuation was the planned supplement remedy. AF implemented SVE at EPA's request to remove VOCs from the contaminated soil. In March 2005, the AF withdrew OU2 from the CERCLA process and converted the cleanup management process to a Corrective Action Plan (CAP) and the State assumed the regulatory lead.

OU3 Landfills, Disposal Areas, and VOC Sites: The OU3 ROD of November 1998 selected remedies for capping and access controls of landfills/disposal areas, and bioventing or SVE for VOC sites. Response actions for the landfills/disposal areas were completed. Following are ongoing actions for VOC sites:

FT-19a Petroleum Site - Bioventing operations started in April 1996 for vadose zone remediation. Biodegradation rates were not progressing as planned, and AF supplemented bioventing with SVE in 2007. An ESD to document the remedy modification was planned for completion in December 2008. Until the state water board's issues with using a state land use covenant are resolved, the ESD cannot be completed and all agencies agreed to classify the SVE as a pilot project in the interim.

FT-19c TCE Site - SVE operations started in March 1996 for vadose zone remediation, and the SVE system was expanded with more SVE wells in 2007 to treat the deeper zone.

ZZ051 Petroleum Site - Bioventing was used for several years to treat the petroleum contamination in the vadose zone with little results. In 2003, SVE was added to supplement the bioventing. When EPA concurred with AF that the SVE-bioventing system was "operating properly and successfully" in 2007, the site was transferred to the LRA but the SVE system is still active.

OT-69 TCE Site - This site currently consists of several small TCE plumes that were part of one large plume initially. Increased TCE levels at one location triggered a ROD mandate for more aggressive response actions beyond the selected natural attenuation remedy, and SVE was implemented at the site. Air Force developed a groundwater model to predict contaminate flow.

OU4 was to document the no further action decision for following sites: AOC 72/Current Skeet Range, AOC 73/Second Skeet Range, AOC 74/Original Skeet Range, AOC 75/Indoor Range, AOC76/Dozer Scar Area, AOC 77/Disturbed Area, AOC 78/Explosive Ordinance Disposal Training Area, and AOC 80/Building 513. Only the skeet ranges were carried forward to the OU5 ROD as all other planned OU4 sites were documented by the Air Force's No Further Response Action Report (NFRAP) completed in 2008.

OU5 is mainly an active SVE system at Sites FT-082 and SS-083 put in place to remove the high TCE levels in soil acting as a source column to OU1's TCE groundwater plume. OU5 also includes three closed Skeet Ranges that are not expected to require further action (OT072, OT073 and OT074).The OU5 ROD for these sites was completed in 2015.

Site Studies

The Lahontan Regional Water Quality Control Board (RWQCB) issued a Notice of Violation letter to the AF for dieldrin pesticide contamination in groundwater. AF is only monitoring the pesticides in groundwater as the levels are very low, but the plume has not been fully defined because of funding constraints. AF would not consider EPA's request for an evaluation of the contamination extent in soil because they do not consider there has been a CERCLA release to the environment since past general practices mandated the routine application of pesticides for termite control. AF submitted a revised CAP document to address dieldrin in 2015, and it was approved by RWQCB in 2016.

The EPA, State, and AF signed the Federal Facilities Agreement in October 1990 for cleaning up the base. The base is participating in the Installation Restoration Program, a specially funded program established by the DOD in 1978 to identify, investigate, and control the migration of hazardous contaminants at various DOD facilities.

Cleanup Results to Date

Cleanup Progress: The existing OU1 PAT remedy cannot achieve the ROD objectives as planned and Air Force plans to submit a ROD amendment for remedy modification. AF installed 10 additional wells in 2009 to help address data gaps as part of the ROD amendment effort and 3 additional wells in 2015. The ongoing SVE or enhanced SVE system is effectively reducing the VOC levels at various soil sites.

> **Restoration/Reuse Progress**: The AF could not transfer remaining base property in FY08 as planned, but will continue to push for early transfer after resolving the state land use covenant issues with City of Victorville and state water board. Most of the base property is in active reuse either as leased or transferred property. Victorville acts as the local reuse agency (LRA) for property leases from the AF until they can be transferred by deed to new owners. Victorville's plans for development of a rail yard facility is postponed indefinitely from an uncertain economy. EPA chairs reuse meetings to identify potential mitigation measures for reuse that impacts the infrastructure of treatment systems and landfill caps in place.

Potentially Responsible Parties

Potentially responsible parties (PRPs) refers to companies that are potentially responsible for generating, transporting, or disposing of the hazardous waste found at the site.

The Air Force is the PRP for the site.

Documents and Reports

Records of Decision

12/01/92Draft Record of Decision - Operable Unit 2
03/05/94Record of Decision - Operable Unit 1
10/05/98Record of Decision - Operable Unit 3
11/08/04Removal of Operable Unit 2 (OU 2) from the Federal Facility Agreement (FFA) at George Air Force Base

Technical Documents

11/17/16Fourth Five-Year Review Report (excluding Appendices)

Community Involvement

Public Meetings: The Air Force hosts a public forum in the adjacent Cities of Apple Valley, Adelanto or Victorville annually.

Public Information Repositories

Additional Links

See Air Force website for a complete collection of documents: http://afcec.publicadmin-record.us.af.mil/Search.aspx

The public information repositories for the site are at the following locations:

Air Force Base Conversion Agency
George AFB Field Office
18374 Phantom Street
Victorville, CA 92392
(760) 246-5360

The most complete collection of documents is the official EPA site file, maintained at the following location:

Superfund Records Center
Mail Stop SFD-7C
95 Hawthorne Street, Room 403
San Francisco, CA 94105
(415) 820-4700

Enter main lobby of 75 Hawthorne street, go to 4th floor of South Wing Annex.

Contacts

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EPA Community Involvement Coordinator

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EPA Public Information Center

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PRP Contact

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Other Contacts

After Hours (Emergency Response)

US EPA
(800) 424-8802

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